

SEQUENCE LISTING



B
D
<110> BERTHOLD, Peter
ESCHER, Robert F.A.

<120> Anti-GPIIB/IIIA Recombinant Antibodies

<130> 100564-09049

<140> US 09/424,840

<141> 1999-12-03

<150> DE 19723904.8

<151> 1997-06-06

<150> DE 19755227.7

<151> 1997-12-12

<150> DE 19820663.1

<151> 1998-05-08

<160> 127

<170> PatentIn Ver. 2.1

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<pre> tct tgg aga tgg atc cgg cag tct cca ggg aag gga cta gag tgg att Ser Trp Arg Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45 </pre>	144
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<pre> cga gtc ttg ccc ttt gac ccg atc tcg atg gac gtc tgg ggc aaa ggg </pre>	336

Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly
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357

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1 5 10 15
Thr Leu Ser Leu Asn Cys Thr Val Ser Gly Arg Ser Ile Ser Gly Tyr
20 25 30
Ser Trp Arg Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Gly Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg
50 55 60
Ser Arg Val Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly
100 105 110
Thr Thr Val Thr Val Ser Ser
115

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<220>
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Val Val Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Trp Val
1 5 10 15
acc atc tct tgt tct ggg agc agc tcc aac atc aga agt aat cct gtt 96
Thr Ile Ser Cys Ser Gly Ser Ser Asn Ile Arg Ser Asn Pro Val
20 25 30
agc tgg tat cac cag gtc cca ggc acg gcc ccc aaa ctc ctc atc ttt 144
Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe

35	40	45	
ggt agt cat cag cgg ccc tca ggg gtc cct gac cga ttc tct ggc tcc Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser			192
	55	60	
aag tcg ggc acc tcc gcc tcc ctg gcc atc cgt ggg ctc caa tct ggg Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly			240
	70	75	
gat gct ggt gac tat tac tgt gca aca tgg gat gac ggc ctc aat ggt Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly			288
	85	90	
ccg gtg ttc ggc gga ggg acc aag ctg acc gtc cta agt cag ccc Pro Val Phe Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro			333
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Thr Ile Ser Cys Ser Gly Ser Ser Asn Ile Arg Ser Asn Pro Val			
	20	25	30
Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe			
	35	40	45
Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser			
	50	55	60
Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly			
	65	70	75
Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly			
	85	90	95
Pro Val Phe Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro			
	100	105	110

<210> 5
<211> 369
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<213> Homo sapiens

<220>
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<222> (1)...(369)

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tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt agc tat Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30				96
gct atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45				144
gca gtt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val 50 55 60				192
aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg ctg tat Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80				240
ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95				288
tgcg aga gcg ctg ggg agc tgg ggg ggt tgg gac cac tac atg gac gtc Ala Arg Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val 100 105 110				336
tgg ggc aaa ggg acc acg gtc acc gtc tcc tca Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser 115 120				369

<210> 6
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 <212> PRT
 <213> Homo sapiens

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30				
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45				
Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val 50 55 60				
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80				
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95				
Ala Arg Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val 100 105 110				
Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser 115 120				

<210> 7
 <211> 333
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(333)

<400> 7

gtg	gtg	act	cag	cca	ccc	tca	gcg	tct	ggg	acc	ccc	ggg	cag	agg	gtc		48
Val	Val	Thr	Gln	Pro	Pro	Ser	Ala	Ser	Gly	Thr	Pro	Gly	Gln	Arg	Val		
1	5							10					15				

acc atc tct tgt tct gga agc agc tcc aac atc gga agt aat act gta

Thr	Ile	Ser	Cys	Ser	Gly	Ser	Ser	Asn	Ile	Gly	Ser	Asn	Thr	Val		96
									25				30			
20																

aac tgg tac cag cag ctc cca gga acg gcc ccc aaa ctc ctc atc tat

Asn	Trp	Tyr	Gln	Gln	Leu	Pro	Gly	Thr	Ala	Pro	Lys	Leu	Leu	Ile	Tyr		144
									35				40		45		

agt aat aat cag cgg ccc tca ggg gtc cct gac cga ttc tct ggc tcc

Ser	Asn	Asn	Gln	Arg	Pro	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser		192
								50				55		60			

aag tct ggc acc tca gcc tcc ctg gcc atc agt ggg ctc cag tct gag

Lys	Ser	Gly	Thr	Ser	Ala	Ser	Leu	Ala	Ile	Ser	Gly	Leu	Gln	Ser	Glu		240
								65			70		75		80		

gat gag gct gat tat tac tgt gca gca tgg gat gac agc ctg aat ggt

Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Ala	Ala	Trp	Asp	Asp	Ser	Leu	Asn	Gly		288
								85			90		95				

tgg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt cag ccc

Trp	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro		333
								100			105		110			

<210> 8
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 <213> Homo sapiens

<400> 8

Val	Val	Thr	Gln	Pro	Pro	Ser	Ala	Ser	Gly	Thr	Pro	Gly	Gln	Arg	Val		
1	5							10					15				

Thr Ile Ser Cys Ser Gly Ser Ser Asn Ile Gly Ser Asn Thr Val

								20			25		30		

Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr

								35			40		45		

Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser

								50			55		60		

Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu
 65 70 75 80
 Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly
 85 90 95
 Trp Val Phe Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
 100 105 110

<210> 9
 <211> 369
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(369)

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<210> 10
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 10

Gln Val Lys Leu Leu Glu Ser Gly Gly Leu Val His Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asn Phe
 20 25 30
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile
 100 105 110
 Trp Gly Gln Gly Thr Lys Val Thr Val Ser Ser
 115 120

<210> 11
 <211> 375
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (1)...(375)

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Val Val Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile	
1 5 10 15	
acc atc tcc tgc act gga acc agc agt gct att ggg aat tat aac ttt	96
Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe	
20 25 30	
gtc ccc tgg tac caa cag cac cca ggc aaa gcc ccc aaa ctc atg att	144
Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile	
35 40 45	
tat gag ggc agt aag cgg ccc tca ggg gtt tct aat cgc ttc tct ggc	192
Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly	
50 55 60	
tcc aag tct ggc aac acg gcc tcc ctg aca atc tct ggg ctc cag gct	240
Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala	
65 70 75 80	
gag gac gag gct gag tat tac tgc tgc tca tat gtt cat agt agc act	288
Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr	
85 90 95	

aat tgg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt cag ccc 336
Asn Trp Val Phe Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
100 105 110

aag gct gcc ccc tcg gtc act ctg ttc cca ccc tcc tct 375
Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
115 120 125

<210> 12
<211> 125
<212> PRT
<213> Homo sapiens

<400> 12
Val Val Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile 15
1 5 10
Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe
20 25 30
Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile
35 40 45
Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly
50 55 60
Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala
65 70 75 80
Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr
85 90 95
Asn Trp Val Phe Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
100 105 110
Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
115 120 125

<210> 13
<211> 366
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(366)

<400> 13 48
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Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15
acc ctg tct ctc acc tgc act gtc tct gat gtc tcc atc aga agt cat 96
Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Val Ser Ile Arg Ser His
20 25 30
tac tgg agt tgg ctc cgg cag ccc cca ggg aag gga ctg gag tgg att 144
8

Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile	45	
35	40	
ggg ttt atc tat gac ggt gcg aga acc agg ttc aac ccc tcc ctc agg	192	
Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg	60	
50	55	
agt cga gtc tcc ctt tca atg gac cca tcc aag aag cag ttt tcc ctg	240	
Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu	80	
70	75	
aaa ctg ggg tct gtg acc gct gcg gac tcg gcc gtc tac tac tgt gcg	288	
Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala	95	
85	90	
aga gac gcg gat gga gat ggc ttc agc cca tac tac ttt ccc tac tgg	336	
Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp	110	
100	105	
ggc cag gga atc ccg gtc tcc gtc tcc tcg	366	
Gly Gln Gly Ile Pro Val Ser Val Ser Ser	120	
115		

<210> 14
 <211> 122
 <212> PRT
 <213> Homo sapiens

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20	25	
Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile	45	
35	40	
Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg	60	
50	55	
Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu	80	
65	70	
Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala	95	
85	90	
Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp	110	
100	105	
Gly Gln Gly Ile Pro Val Ser Val Ser Ser	120	
115		

<210> 15
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 <213> Homo sapiens

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Gln Val Lys Leu Leu Glu Ser Gly Gly Val Val His Pro Gly Arg
1 5 10 15
tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt agc tat 96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
act atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg 144
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
gca ctt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg 192
Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60
.aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg cta tat 240
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt 288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
gcg aaa gat ggc cgg agt ggg agc tac gcc agg ttc gac ggt atg gac 336
Ala Lys Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp
100 105 110
gtc tgg ggc caa ggg acc acg gtc acc gtc tcc tca 372
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 16
<211> 124
<212> PRT
<213> Homo sapiens

<400> 16
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

<210> 17
<211> 372
<212> DNA
<213> *Homo sapiens*

<220>
<221> CDS
<222> (1)..(372)

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 Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

tca ggt att agt tgg gat agt ggt acc ata ggc tat gcg gac tct gtg
 Ser Gly Ile Ser Trp Asp Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val
 50 55 60 192

aag ggc cga ttc acc atc tcc aga gac aac gcc aag aac tcc ctg tat
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

288

ctg caa atg aac agt ctg aga gct gag gac acg gcc ttg tat tac tgt
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95

gta aaa gat atg ggg tct tcg gta gtg gct acg tac aat gct ttt gat 336
 Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
 100 105 110

atc tgg ggc caa ggg aca atg gtc acc gtc tct tca
 Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 18
<211> 124
<212> PRT
<213> *Homo sapiens*

<400> 18

Gln Val Lys Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Trp Asp Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
 100 105 110
 Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 19
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<220>
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<400> 19 48
 cag gtg aaa ctg ctc gag tca ggc cca gga ctg gtg aag cct tcg gag
 Gln Val Lys Ieu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15
 acc ctg tcc ctc acc tgc act gtc tct ggt ggc tcc ttc agt act tac 96
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Phe Ser Thr Tyr
 20 25 30
 tat tgg agc tgg atc cgg cag ccc cca ggg aag gga ctg gag tgg att 144
 Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 ggg tat atc tat tac agt ggg aac acc aac tac aac ccc tcc ctc aag 192
 Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60
 agt cga gcc acc ata tca gta gac acg tcc aag aac cag ttc tcc ctg 240
 Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80
 aag ctg agc tct gtt acc gcc gca gac acg gcc gta tat tac tgt gcg 288
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95

aga ctg cgt aac gat ggc tgg aat gat ggc ttt gat atc tgg ggc caa 336
Arg Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile Trp Gly Gln
100 105 110

360
ggg aca atg gtc acc gtc tct tca
Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 20
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<212> PRT
<213> Homo sapiens

<400> 20
Gln Val Lys Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu 15
1 5 10
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Phe Ser Thr Tyr 30
20 25
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile 45
35 40
Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys 50 55 60
Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu 80
65 70 75
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala 95
85 90
Arg Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile Trp Gly Gln 110
100 105
Gly Thr Met Val Thr Val Ser Ser 120
115

<210> 21
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<213> Homo sapiens

<220>
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<222> (1)...(369)

<400> 21 48
cag gtg aaa ctg ctc gag tct ggg gga ggc gtg gtc cag cct ggg agg
Gln Val Lys Leu Leu Glu Ser Gly Gly Val Val Gln Pro Gly Arg 15
1 5 10 15
tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt gac tat 96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr 20 25 30
ggc atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg 144
13

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val	40	45	
35			
gca gct ata tca tat gat gga agt aac aaa tac tat gca gac tcc gtg			192
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Ala Asp Ser Val			
50	55	60	
aag ggc cga ttc tcc atc tcc aga gac aat tcc aac aat acg cta tat			240
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Tyr			
70	75	80	
ctg caa atg agc acc ctg aga gct gag gac acg gct gtc tat ttc tgt			288
Leu Gln Met Ser Thr Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys			
85	90	95	
gcg aga gat tcg gaa acg gca ata gca gct gga cggtttt gat atc			336
Ala Arg Asp Ser Glu Thr Ala Ile Ala Ala Gly Arg Phe Asp Ile			
100	105	110	
tgg ggc caa ggg aca atg gtc acc gtc tct tca			369
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser			
115	120		

<210> 22
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 22			
Gln Val Lys Leu Leu Glu Ser Gly Gly Val Val Gln Pro Gly Arg			
1	5	10	15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr			
20	25	30	
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val			
35	40	45	
Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Ala Asp Ser Val			
50	55	60	
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Tyr			
65	70	75	80
Leu Gln Met Ser Thr Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys			
85	90	95	
Ala Arg Asp Ser Glu Thr Ala Ile Ala Ala Gly Arg Phe Asp Ile			
100	105	110	
Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser			
115	120		

<210> 23
 <211> 366
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(366)

<400> 23 cag gtg aaa ctg ctc gag tct ggg gct gag gtg aag aag cct ggg tcc Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser 1 5 10 15 tcg gtg atg gtc tcc tgc aag gct tct gga ggc acc ttc agc agc cat Ser Val Met Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser His 20 25 30 act atc agc tgg gtg cgg cag gcc cct gga caa ggc ctt gag tgg atg Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45 gga ggg atc acc cct atc ttt ggt aca gtg aac tac gca cag aag ttc Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe 50 55 60 -cag ggc aga gtc acc att acc gcg gac gaa ccc acg agc aca gcc tac Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr 65 70 75 80 atg gaa ctg agg agc ctg aca tct gac gac tcg ggc atc tat tac tgt Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys 85 90 95 gcg aga gaa gat ggc act aca gta cca agt caa ccc ctt gag ttc tgg Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp 100 105 110 ggc cag gga acc cgg gtc acc gtc tcc tct Gly Gln Gly Thr Arg Val Thr Val Ser Ser 115 120	48 96 144 192 240 288 336 366
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<210> 24
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 24 Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser 1 5 10 15 Ser Val Met Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser His 20 25 30 Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45 Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe 50 55 60 Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr 65 70 75 80	15 30 45 60 80
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Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys
 85 90 95
 Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp
 100 105 110
 Gly Gln Gly Thr Arg Val Thr Val Ser Ser
 115 120

<210> 25
 <211> 363
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(363)

<400> 25 cag gtg aaa ctg ctc gag tct ggg gga ggc ttg gtc cag cct ggg ggg .Gln Val Lys Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly 1 5 10 15	48
tcc ctg aga ctc tcc tgt tca gcc tct gga ttc acc ttc aat aaa tat Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr 20 25 30	96
gca ata cac tgg gtc cgc cag gct cca ggg aag gga ctg gaa tat gtt Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val 35 40 45	144
tca gct att agt agt aat ggg ggt aac aca tac tac gca gac tcc gtg Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val 50 55 60	192
aag ggc aga ttc acc atc tcc aga gac aat tcc aag aac acg gtg tat Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr 65 70 75 80	240
ctt caa atg agc agt ctg aga gct gag gac acg gct gtg tat tac tgt Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95	288
gtt aga gga agt ggg agc tac tta gga tac tac ttt gac tac tgg ggc Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly 100 105 110	336
cag gga acc ctg gtc acc gtc tcc tca Gln Gly Thr Leu Val Thr Val Ser Ser 115 120	363

<210> 26
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 26

Gln Val Lys Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly
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 Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr
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 Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
 35 40 45
 Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 27
 <211> 366
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (1)..(366)

<400> 27 48
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 Val Val Thr Gln Pro Pro Ser Val Val Ala Pro Arg Gln Thr Ala
 1 5 10 15
 acg att acc tgt ggg gga tac aag att gga agt aaa agt gtc cac tgg 96
 Thr Ile Thr Cys Gly Gly Tyr Lys Ser Lys Ser Val His Trp
 20 25 30
 tac caa cag aag cca ggc cag gcc cct gta ttg gtc gtc tat gag gat 144
 Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
 35 40 45
 tcc tac cgg ccc tca gag atc cct gag cga ttc tct ggc tcc aac tct 192
 Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
 50 55 60
 ggg aac atg gcc acc ctg acc atc acc ggg gtc gaa gcc ggg gat gag 240
 Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
 65 70 75 80
 gcc gac tac tac tgt cag gtg tgg gat aat act aat gat cag acg ata 288
 Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
 85 90 95

ttc ggc gga ggg acc aag ctg acc gtc cta cgt cag ccc aag gct gcc 336
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
100 105 110

ccc tcg gtc act ctg ttc ccg ccc tcc tct 366
Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
115 120

<210> 28
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<212> PRT
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<400> 28
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Thr Ile Thr Cys Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His Trp
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Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
35 40 45
Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
85 90 95
Phe Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
100 105 110
Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
115 120

<210> 29
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<213> Homo sapiens

<220>
<221> CDS
<222> (1)...(366)

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Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15
tca gtg aag gtc tcc tgc aag gtt tcc gga tac acc ctc act gaa tta 96
Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
20 25 30
tcc atg cac tgg gtg cga cag gct cct gga aaa ggg ctt gag tgg atg 144
18

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met	45	
35	40	
gga ggt ttt gat cct gaa gat ggt gaa aca atc tac gca cag aaa ttc	192	
Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe	55	
50	60	
cag ggc aga gtc acc atg acc gag gac aca tct aca gac acg gcc tac	240	
Gin Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr	75	
65	80	
atg gag ctg agc ctg aga tct gag gac acg gcc gtg tat tac tgt	288	
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys	95	
85	90	
gag aca ggt ctg agg tcg tac aac tat ggt cgt aac ctt gac tat tgg	336	
Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp	110	
100	105	
ggc cag gga acc ctg gtc acc gtc tcc tca	366	
Gly Gln Gly Thr Leu Val Thr Val Ser Ser	120	
115		

<210> 30
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<400> 30		
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Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu	30	
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ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met	45	
35	40	
Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe	60	
50	55	
Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr	80	
65	70	
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys	95	
85	90	
Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp	110	
100	105	
Gly Gln Gly Thr Leu Val Thr Val Ser Ser	120	
115		

<210> 31
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      5          10
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<210> 32
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<212> PRT
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<400> 32
Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
      5          10
     1

<210> 33
<211> 5
<212> PRT
<213> Homo sapiens

<400> 33
Gly Tyr Ser Trp Arg
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     1

. <210> 34
. <211> 5
. <212> PRT
. <213> Homo sapiens

<400> 34
Ser Tyr Ala Met His
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     1

<210> 35
<211> 16
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<400> 35
Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg Ser
      5          10          15
     1

<210> 36
<211> 17
<212> PRT
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<400> 36
Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
      5          10          15
     1

<210> 37
<211> 11
<212> PRT
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<400> 37
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<210> 38
<211> 11
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<400> 38
Ala Ala Trp Asp Asp Ser Leu Asn Gly Trp Val
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<400> 39
Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val Ser
1 5 10

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Gly Ser His Gln Arg Pro Ser
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<210> 42
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<400> 42
Ser Asn Asn Gln Arg Pro Ser
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<210> 43
<211> 16
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Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp Val
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<210> 45
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5 10
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<210> 46
<211> 14
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<210> 51
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<210> 52
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<212> PRT
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Cys Ser Tyr Val His Ser Ser Thr Asn
1 5

<210> 53
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<400> 53
Gln Val Trp Asp Asn Thr Asn Asp Gln
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<400> 55
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<400> 56
Asp Tyr Ala Leu His
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<400> 57
Ser His Tyr Trp Ser
1 5

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- <210> 58
<211> 5
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<400> 58
Thr Tyr Tyr Trp Ser
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<400> 59
Asp Tyr Gly Met His
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Ser His Thr Ile Ser
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Lys Tyr Ala Ile His
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<400> 62
Glu Leu Ser Met His
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<210> 63
<211> 17
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<400> 63
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* <210> 64
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<400> 67
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- <210> 70
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<210> 71
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<400> 71
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<210> 72
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<400> 72
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<210> 73
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Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly
1 5 10 15

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1 5 10 15

<210> 75
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<210> 77
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Lys Gly

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Ser

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Asp Tyr Gly Met His
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<210> 89
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<210> 90
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<400> 93
Ser Tyr Gly Met His
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Glu Leu Ser Met His
1 5

<210> 95
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<211> 17
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<210> 98
<211> 17
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<400> 102 Gln Val Trp Asp Ser Ser Ser Asp His 5
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<210> 103
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<400> 103
Ser Tyr Ala Met Ser
1 5

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<400> 104
Ser Tyr Gly Met His
1 5

*<210> 105
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; <212> PRT
; <213> Homo sapiens

<400> 105
Asp Tyr Ala Met His
1 5

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<400> 106
Ser Tyr Tyr Trp Ser
1 5

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<211> 17
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Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

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<211> 17
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<210> 110
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<210> 111
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<400> 111 Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly 15
5 10
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<210> 112
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<212> PRT
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5 10
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<210> 113
<211> 17
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 35 45
 40

Ser Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val
 50 60
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 80
 70

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
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Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
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Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
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115

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